

SR 195, I-8 to US 95
ALTERNATIVE SELECTION REPORT / ENVIRONMENTAL OVERVIEW EVALUATION MATRIX

	NO BUILD	ALTERNATIVE A	ALTERNATIVE B-1	ALTERNATIVE B-2	ALTERNATIVE B-3	ALTERNATIVE C	ALTERNATIVE D	ALTERNATIVE E	ALTERNATIVE F	ALTERNATIVE G	ALTERNATIVE H
Description	I-8 to US 95	Avenue 3E	Araby Road Elevated	Araby Road Depressed	Araby Road At-Grade	Avenue 9 ½ E	Co. 14 St to 9E	Co. 14 St to 10E	Fortuna Road	A Canal to 10E	A Canal to Fortuna
Engineering											
New traffic interchanges (TI)	None	Possible TI at US 95.	Possible TI at US 95. New TI at 24 th St.	Possible TI at US 95. New TI at 24 th St.	Possible TI at US 95.	Possible TI at US 95.	Possible TI at US 95. New connection to ASH at Co. 14 St.	Possible TI at US 95. New connection to ASH at Co. 14 St.	Possible TI at US 95.	Possible TI at US 95.	Possible TI at US 95. New connection to Fortuna Road.
Impacts/ required modifications to existing TI's	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Potential improvements to I-8/ US 95 TI	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Potential improvements to I-8/Ave 3E TI.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Reconstruct ramps at East Yuma TI.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Eliminate ramps at East Yuma TI. New TI at Ave 9E.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Potential modifications to I-8/ Fortuna Road T.I. Potential modifications to East Yuma TI to fit additional mainline lanes.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Reconstruct ramps at East Yuma TI.	Modifications to/ reconstruction of I-8/ Araby Road TI to be evaluated in DCR phase. Reconstruct ramps at East Yuma TI.
Impacts to existing frontage roads	None	None	None	None	None	Realign portions of north frontage road at Ave 8½ E.	Re-align portions of 32 nd St. and north frontage road at Ave 9E.	None	Fortuna TI modifications may impact north frontage road.	Realign portions of north frontage road at Ave 8 ½ E.	Realign portions of north frontage road at Ave 8 ½ E.
Travel distance, SR 195/Co. 14 St. to US 95/Fortuna Road	18.4 miles	15.9 miles	9.4 miles	9.4 miles	9.4 miles	9.3 miles	9.2 miles	9.2 miles	10.2 miles	9.3 miles	9.1 miles
Mainline grades	N/A	4% max	4% max	3% max	3% max	4% max	4% max	3% max	Exst Fortuna Road, 5% max. Re-profile Fortuna Road with grade separation over the railroad, 5% max.	3% max	Exst Fortuna Road 5% max. Re-profile Fortuna Road with grade separation over the railroad, 5% max.

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Impacts to access	N/A	Raised median may restrict access along Ave 3E. Potential modifications to US 95 may limit access near Ave 3E intersection.	Access to neighborhoods to be relocated to 24 th Street, Ave 7E. Turning movements may require special consideration at 26 th St. due to close proximity of ramp gores. Potential modifications to US 95 may limit access near Araby Road intersection.	Access to neighborhoods to be relocated to 24 th Street, Ave 7E. Turning movements may require special consideration at 26 th St. due to close proximity of ramp gores. Potential modifications to US 95 may limit access near Araby Road intersection.	Raised median may restrict access along Araby Road. Potential modifications to US 95 may limit access near Araby Road intersection.	Land between canal and US 95 will require access revisions, limited access to SR 195. Potential modifications to US 95 may limit access near Ave 9 ½ E intersection.	Relocate neighborhood access between 40 th St. and 32 nd St. to frontage roads. Relocate neighborhood access between I-8 and 28 th St. to frontage roads. Potential modifications to US 95 may limit access near Ave 9E intersection.	No access from SR 195 to I-8 – grade separation only. Relocate neighborhood access between 40 th St. and 32 nd St. to frontage roads. Relocate neighborhood access between I-8 and 24 th St. to frontage roads. Potential modifications to US 95 may limit access near Ave 10E intersection.	Raised median may restrict access along Fortuna Road. Local access roads may be required to provide neighborhood access north of I-8. Potential modifications to US 95 may limit access near Fortuna Road intersection.	SR 195 raised median will restrict access between railroad and US 95. Potential modifications to US 95 may limit access near Ave 10E intersection.	Potential modifications to US 95 may limit access near Fortuna Road intersection.
Relative Costs Length of new roadway	None	None	None	None	None	2.2 miles	4.5 miles	6.5 miles	None	2.4 miles	2.5 miles
Out of direction travel	9.3 miles	6.8 miles	0.3 miles	0.3 miles	0.3 miles	0.2 miles	0.1 miles	0.1 miles	1.1 miles	0.2 miles	Shortest
Right-of-way (assume 220' width) (preliminary, rounded)	None	< 50 acres	<50 acres	<50 acres	<50 acres	50-100 acres	>100 acres	>100 acres	<50 acres	50-100 acres	50-100 acres
Structures (number, square footage)	None	0 replacements, 0 new 0 sf total	0 replacements, 1 new 8,930 sf total	0 replacements, 1 new 10,330 sf total	0 replacements, 0 new 0 sf total	4 replacements, 3 new 217,320 sf total	0 replacements, 3 new 60,040 sf total	0 replacements, 3 new 96,300 sf total	5 replacements, 1 new 90,230 sf total	4 replacements, 3 new 219,620 sf total	5 replacements, 3 new 147,890 sf total
Estimated Relative Construction Cost (major elements only (differentiators): pavement, structures, earthwork) (For information only; not an official consideration for comparison)	Low	Low	Medium	Medium	Low	High	High	High	Medium	High	High

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Utility impacts	None.	Exst utilities present along Ave 3E. No major conflicts with utilities are anticipated.	Exst utilities present along Araby Road. Possible conflict with APS Electric Transmission lines, City of Yuma water line, Southwest gas line and Qwest Communications phone lines.	Exst utilities present along Araby Road. Possible conflict with APS Electric Transmission lines, City of Yuma water line, Southwest gas line and Qwest Communications phone lines.	Exst utilities present along Araby Road. No major conflicts with utilities are anticipated.	Exst utilities present along A Canal. New roadway adjacent to planned APS 230kV overhead power line. Major conflict with UPRR. No existing at-grade crossing.	Exst utilities present along A Avenue 9E. New roadway adjacent to planned APS 230kV OH power line. Major conflict with APS electric transmission lines. Possible conflicts with water treatment plant and the UPRR. At grade crossing exists and may require major upgrade.	Exst utilities present along Avenue 10E. Major conflict with UPRR. No existing at-grade crossing.	Exst utilities present along Fortuna Road. Possible conflicts with the UPRR. At grade crossing exists and may require major upgrade.	Exst utilities present along A Canal and Avenue 10E. Major conflict with UPRR. No existing at-grade crossing.	Exst utilities present along A Canal and Fortuna Road. Possible conflict with UPRR. No existing at-grade crossing
Railroad impacts	None.	Potential modification of existing Araby Road crossing.	Potential modification of existing Araby Road crossing.	Potential modification of existing Araby Road crossing.	Potential modification of existing Araby Road crossing.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.	Potential modification of existing Araby Road crossing. Potential new structures over railroad.
Construction impacts	None.	Widening of Ave 3E Potential I-8 ramp improvements	Reconstruction of Araby Road	Reconstruction of Araby Road	Widening of Araby Road	Reconstruction of East Yuma TI	Removal of East Yuma TI. New TI at Ave 9E. Reconstruction of Ave 9E	Reconstruction of Ave 10E	Widening and reconstruction of Fortuna Road Potential I-8 ramp improvements	Reconstruction of East Yuma TI	Reconstruction of East Yuma TI Reconstruction of Fortuna Road
Environmental											
Social and Economic Environment											
Possible Section 4(f) properties	None.	Potential involvement with one Section 4(f) property.	Potential involvement with two Section 4(f) properties.	Potential involvement with two Section 4(f) properties.	Potential involvement with two Section 4(f) properties.	Potential involvement with three Section 4(f) properties.	Potential involvement with three Section 4(f) properties.	Potential involvement with three Section 4(f) properties.	Potential involvement with two Section 4(f) properties.	Potential involvement with three Section 4(f) properties.	Potential involvement with two Section 4(f) properties.

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Approximate acreage of land use in corridor (e.g., residential, industrial, undeveloped)	Corridor comprised of: 2.0 % (16.0 acres) residential, 1.6 % (12.8 acres) agricultural, 10.3 % (82.9 acres) industrial, 3.2 % (26.1 acres) governmental, 14.1 % (114 acres) commercial, and 68.8 % (557 acres) undeveloped	Corridor comprised of: 7.7 % (44.8 acres) agricultural, 10.1 % (58.4 acres) industrial, 2.8 % (16.3 acres) governmental, 8.8 % (51.1 acres) commercial, and 70.6 % (409 acres) undeveloped	Corridor comprised of: 10.2 % (32.1 acres) residential, 24.7 % (77.7 acres) agricultural, 14.8 % (46.7 acres) intuitional, 2.4 % (7.6 acres) governmental, 2.6 % (8.1 acres) commercial, 1.3 % (4.2 acres) public, and 44.0 % (139 acres) undeveloped	Corridor comprised of: 10.2 % (32.1 acres) residential, 24.7 % (77.7 acres) agricultural, 14.8 % (46.7 acres) intuitional, 2.4 % (7.6 acres) governmental, 2.6 % (8.1 acres) commercial, 1.3 % (4.2 acres) public, and 44.0 % (139 acres) undeveloped	Corridor comprised of: 10.2 % (32.1 acres) residential, 24.7 % (77.7 acres) agricultural, 14.8 % (46.7 acres) intuitional, 2.4 % (7.6 acres) governmental, 2.6 % (8.1 acres) commercial, 1.3 % (4.2 acres) public, and 44.0 % (139 acres) undeveloped	Corridor comprised of: 3.9 % (21.3 acres) residential, 18.9 % (102 acres) agricultural, 1.5 % (8 acres) governmental, 3.5 % (19.0 acres) industrial, and 72.2 % (389 acres) undeveloped	Corridor comprised of: 15.1 % (135 acres) residential, 11.5 % (103 acres) agricultural, 0.9 % (8.0 acres) governmental, and 72.5 % (651 acres) undeveloped	Corridor comprised of: 13.3 % (140 acres) residential, 7.3 % (76.0 acres) agricultural, 3.8 % (39.7 acres) intuitional, and 75.6 % (792 acres) undeveloped	Corridor comprised of: 19.8 % (206 acres) residential, 1.8 % (19.0 acres) industrial, and 71.2 % (742 acres) undeveloped	Corridor comprised of: 5.4 % (32.2 acres) residential, 12.7 % (76.0 acres) agricultural, 3.2 % (19.0 acres) industrial, 1.3 % (8.0 acres) governmental, and 77.4 % (461 acres) undeveloped	Corridor comprised of: 2.1 % (14.1 acres) residential, 1.3 % (8.7 acres) agricultural, 2.8 % (19.0 acres) industrial, 1.2 % (8.0 acres) governmental, and 92.6 % (633 acres) undeveloped
Approximate acreage of land ownership	Approximately 98 percent (1078 acres) of the corridor is on private land and 2% (23 acres) is BLM land.	Approximately 97% (946 acres) of the corridor is on private land and 3% (32 acres) on BLM land.	Approximately 100% (636 acres) of the corridor is on private land.	Approximately 100% (636 acres) of the corridor is on private land.	Approximately 100% (636 acres) of the corridor is on private land.	Approximately 78% (489 acres) of the corridor is on private land, 5% (34 acres) on BLM, 1% (9 acres) on BOR, and approximately 16% (99 acres) on land administered by ASLD.	Approximately 49% (536 acres) of the corridor is on private land, 20% (221 acres) on the Barry M. Goldwater Range, 2% (16 acres) on BLM land, and approx. 29% (321 acres) on land administered by ASLD.	Approximately 34% (379 acres) of the corridor is on private land, 25% (279 acres) is land on the Barry M. Goldwater Range, 4% (46 acres) on BLM land, and approximately 37% on land administered by ASLD.	Approximately 82% (1023 acres) of the corridor is on private land, 2% (31 acres) on BLM land, 1% (7 acres) on BOR, and approximately 16% (99 acres) on land administered by ASLD.	Approximately 66% (450 acres) of the corridor is on private land, 15% (100 acres) on BLM land, 1% (9 acres) on BOR, and approximately 4% (27 acres) on land administered by ASLD.	Approximately 65% (779 acres) of the corridor is on private land, 9% (101 acres) on BLM land, 1% (9 acres) on BOR, and approximately 25% (302 acres) on land administered by ASLD.
Cultural Resources (I-8 completely surveyed within R/W)											
Potential impacts to number of known resource sites (most sites historic linear features (I-8/Old US 80, A Canal, and UPRR))	None	1 site	2 sites	2 sites	2 sites	3 sites	4 sites	4 sites	2 sites	3 sites	2 sites
Acreage of new survey needed (very rough estimate based on 500 ft either side of center line (reduced by half in previously surveyed areas) – requires AZSITE data to confirm)	n/a	90 acres (1000 ft- wide by ¾ mile-long along Ave 3E)	Unknown	Unknown	Unknown	303 acres (500 ft- wide by 5 mi-long)	300 acres (1000 ft- wide by 2.5 mi -long) plus access road	424 acres (1000 ft– wide by 3.5 mi-long plus access road	364 acres (500 ft- wide by 6 mi long)	121 acres (500 ft - wide by 2 mi long)	150 acres(500 ft - wide by 2.5 mi long)

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Natural and Physical											
Floodplain (note: the northern portion of the project area is removed from the 100 year floodplain by a levee system) Zone A – Areas of 100-year flood: base flood elevations and flood hazard factors not determined.	None	The proposed alignment will involve a crossing of South Gila Canal at an existing crossing. No impact to existing floodplain.	The proposed alignment will involve a crossing of South Gila Canal at an existing crossing. No impact to existing floodplain.	The proposed alignment will involve a crossing of South Gila Canal at an existing crossing. No impact to existing floodplain.	The proposed alignment will involve a crossing of South Gila Canal at an existing crossing. No impact to existing floodplain.	South Gila Canal crossing would not impact the FEMA designated Zone A. New crossing of A Canal.	No impact to existing floodplain. South Gila Canal crossing would not impact the FEMA designated Zone A if the current bridge is widened to span the canal or a new bridge spans the canal. New crossing of A Canal.	New Gila Gravity Main Canal crossing would not impact the FEMA designated Zone A.	No impact to existing floodplain.	New crossing of Gila Gravity Main Canal. The proposed alignment will involve a crossing of A Canal at an existing I-8 crossing.	No impact to existing floodplain. The proposed alignment will involve a crossing of A Canal at an existing I-8 crossing.
Section 404	None	None	None	None	None	None	None	None	None	None	None
Biology (known habitat/ suitable habitat)	No impacts to vegetation or wildlife.	Alignment crosses 0.25 mile of undeveloped desert habitat. Impacts a very small amount of undeveloped land compared to other alternatives.	Alignment crosses 0.25 mile of undeveloped desert habitat. Impacts a very small amount of undeveloped land compared to other alternatives.	Alignment crosses 0.25 mile of undeveloped desert habitat. Impacts a very small amount of undeveloped land compared to other alternatives.	Alignment crosses 0.25 mile of undeveloped desert habitat. Impacts a very small amount of undeveloped land compared to other alternatives.	Potential impacts to FTHL habitat on BLM land. Habitat compensation and/or other mitigation may be required. Alignment crosses 1.75 miles of undeveloped desert habitat.	Potential impacts to FTHL habitat on BLM land and MCASY land (i.e., the BMGR). Habitat compensation and/or other mitigation may be required. Alignment crosses 5.3 miles of undeveloped desert habitat. Impacts a large amount of undeveloped land compared to other alternatives. Impacts a large amount of FTHL habitat compared to other alternatives. Habitat fragmentation would result from a new route across undeveloped desert habitat.	Potential impacts to FTHL habitat on BLM land and MCASY land (i.e., the BMGR). Habitat compensation and/or other mitigation may be required. Alignment crosses 7.5 miles of undeveloped desert habitat. Impacts the largest amount of undeveloped land compared to other alternatives. Impacts a large amount of FTHL habitat compared to other alternatives. Largest habitat fragmentation resulting from a new route across undeveloped desert habitat.	Alignment crosses 1.4 miles of undeveloped desert habitat. Existing impacts from habitat fragmentation would be increased as a result of widening the existing roadway. Impacts a moderate amount of undeveloped land compared to other alternatives.	Potential impacts to FTHL habitat on BLM land. Habitat compensation and/or other mitigation may be required. Alignment crosses 2.3 miles of undeveloped desert habitat. Impacts a moderate amount of undeveloped land compared to other alternatives.	Potential impacts to FTHL habitat on BLM land. Habitat compensation and/or other mitigation may be required. Alignment crosses 3.3 miles of undeveloped desert habitat. Impacts a moderate amount of undeveloped land compared to other alternatives.

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Stakeholder and Public Involvement											
Agency/public support (MRP = Major Roadways Plan)		Avenue 3E was identified as the preferred route by YMPO in 2008.	Araby Road is identified as the preferred route in interagency agreement and in 2005 MRP.	Araby Road is identified as the preferred route in interagency agreement and in 2005 MRP.	Araby Road is identified as the preferred route in interagency agreement and in 2005 MRP.					One of two alternatives closest to the alignment identified by the City of Yuma as the "East Yuma Freeway" in the 2005 MRP.	One of two alternatives closest to the alignment identified by the City of Yuma as the "East Yuma Freeway" in the 2005 MRP.